KENTUCKY DEPARTMENT OF EDUCATION

COMMITTEE FOR MATHEMATICS ACHIEVEMENT

ADVISORY GROUP
SUMMARY

MEETING DATE: SEPTEMBER 7, 2018

ATTENDANCE:

Members: Ryan Davis (KEA), chairperson, Dr. Edna Schack (Morehead State), vice-chair, Dr. Amanda Ellis (KDE), Dr. Dawn Offutt (CPE), Andy Hightower (EWDC), Dr. Dan McGee (KCM), Dr. David Royster (UK), Dr. Jennifer (Jenny) Bay-Williams (UL), Dr. Margaret Yoder (EKU), Dr. Karen Heavin (KSU), Dr. Mary (Molly) Williams (Murray State), Dr. Theodore (Ted) Hodgson (NKU), Jason Taylor (KCTCS), Pamela (Pam) Callahan (KAE), Donnie Osborn (KAE), Scotty Bratcher (KEA), Theresa Williams (KEA), Suzanne Gibbs (KEA), Nicholas (Nick) Chaykowsky (KEA), Jason Detre (KASA), Bobby Bennett (KASA), Robin Hill (KDE administrative support)
Absent: Dr. Gary Cox, represented by Dr. Sarah Murray, Centre, Dr. Natasha Gerstenshalager (WKU), Andrea Hopkins (KEA)

Guests: Dr. Dee Crescitelli, Erin Chavez (KDE MAF coordinator, presenter)

SUMMARY:

Agenda Item #1: Minutes and Meeting dates

Presenter: Ryan Davis

Summary of Discussion: The previously approved meeting dates do not allow for timely and critical feedback to the Kentucky Department of Education and the Kentucky Board of Education. Recommendation: to change meeting dates to the first Friday of November, January and March.

Action Taken: Motion made and seconded to approve meeting minutes from February 23, 2018. Motion carried.

Motion made and seconded to change meeting dates with minimal discussion to clarify dates only. Motion carried.

November 2nd, 2018, January 4th, 2019, March 1st, 2019

Follow-up Required: Hill will send notice to Becky Blessing (KDE Communications) and will include the newly approved dates in next email to committee members.

Agenda Item #2: Proposed Revisions to the Minimum Graduation Requirements Regulation

Presenter: Dr. Amanda Ellis

Summary of Discussion: Following PowerPoint presentation from Ellis during which committee members could ask questions. The presentation included the role of the KBE to prom Promulgate administrative regulations relating to the courses of study for the minimum requirements for high school graduation for entitlement to a high school diploma. She explained the current requirement for graduation as follows:

- Language Arts – 4 Credits-English I, II, III and IV
- Mathematics-3 credits – Algebra I, Geometry and Algebra II
- Social Studies – 3 credits
- Science – 3 credits that shall incorporate lab-based scientific investigation experiences
- Health – ½ credit
- Physical Education – ½ credit
- Visual and Performing Arts – 1 credit
- Electives – 7 credits
- Additional requirements *from legislation* – passage of a civics test, instruction in financial literacy (*freshmen entering in the fall of 2020 – 21 school year*), and demonstration of essential skills and technology.

She spoke about the needs of the state and emphasized the KDE recognizes the importance to educate, prepare and train Kentucky's workforce; and therefore, the convening of workforce representing the career clusters was a necessary and vital component to assist with directing the work to revised the minimum graduation requirements. She shared highlights from the convening included in the Southern Regional Education Board report of participants' responses from the Profile of a Kentucky Graduate Workshop. The report includes trends, issues, skillsets and academic, occupational and employable skills as well as recognized credentials. Ellis will send full report to Hill to share with CMA.

Meeting materials included one-pager of proposed changes, comparison document (current language to proposed language) and proposed regulatory changes within the regulation. Ellis explained the proposed regulatory requirements:

Foundational Level – including proficiency in Reading and Mathematics assessments, requires all students to complete the following credits:

- 2 English Credits – English I and English II (specific)
- 2 Mathematics Credits – Algebra I and Geometry (specific)
- 2 Science Credits
- 2 Social Studies Credits
- 1 Visual and Performing Arts Credit
- ½ Physical Education Credit and ½ Health Credit

Personalized Level – allows students to complete credits and experiences aligned to career interests identified through the Individual Learning Plan (ILP). All juniors will take the college entrance exam and the end-of-span exams for science and social studies. Credits include:

- 2 English Credits
- 2 Mathematics Credits

- 1 Science Credit
- 1 Social Studies Credit
- Work-based Learning Experiences
- Career Pathways

Ellis strongly emphasized that courses required for graduation would have to be aligned to the Kentucky academic standards or higher standards.

Beyond the course and standards work, the regulation includes transition ready components: academic and career-ready as defined in the accountability regulation 703 KAR 5:270.

Academic Transition Ready

- Scoring at or above the benchmark score as determined by the Council on Postsecondary Education (CPE) on the college admissions examination; or
- Completing six (6) or more hours of Kentucky Department of Education (KDE) approved dual credit courses and receiving a grade of B or higher in each course; or
- Completing two (2) or more Advanced Placement (AP) courses and receiving a score of three (3) or higher on each AP assessment; or
- Receiving a score of five (5) or higher on two (2) examinations for International Baccalaureate (IB) courses; or
- Scoring at or above the benchmark on two (2) or more Cambridge Advanced examinations; or
- Completing a combination of academic readiness indicators listed above.

Career Ready

- Scoring at or above the benchmark on industry certifications as approved by the Kentucky Workforce Innovation Board (KWIB) on an annual basis; or
- Scoring at or above the benchmark on the Career and Technical Education (CTE) end-of-program assessment for articulated credit; or
- Completing six (6) or more hours of KDE approved CTE dual credit courses, and receiving a grade of B or higher in each course; or
- Completing a KDE approved or Labor Cabinet approved apprenticeship; or
- Completing a KDE approved alternate process to verify exceptional work experience.

Following the presentation, members were asked to pair up to discuss their reactions and concerns with the proposed regulation with possible recommendations. Then, each member was asked to write each recommendation on a separate post-it paper. The Post-it papers were used to frame the afternoon discussion. After a lunch break, Davis reconvened the meeting and asked the committee to declare a direction for the CMA to take with regards to the proposed regulation. Advise the KBE and the KDE to

1. move forward with approving the regulation as is (majority disagreed),
2. start over with a new direction for the regulation (majority disagreed), and
3. not to support the regulation as is but to consider and make changes based on the CMA recommendations that affect minimum graduation requirements for mathematics (majority agreed).

Action Taken: Motion made that The Committee for Mathematics Achievement advise the Kentucky Board of Education not support the proposed graduation requirements as they stand. Motion was seconded with substantial discussion regarding intent of message. Motion passed with the KDE abstaining from the vote.

Discussion included actions to be taken by the KDE to modify the proposed regulation's effect on the minimum graduation requirements for mathematics.

Action of writing motion with recommendations for what should be considered in the regulatory language followed. Davis facilitated the discussion.

Recommendations from discussion:

- Due to swift timeline for implementation of this proposed regulation, a transition plan showing:
    - how new graduation requirements would be phased in ,
    - how parents, schools, and districts would be educated on the new requirements, and
    - how educators at all levels would be trained to help students be successful

  must be created and shared before it goes into effect.
- Equity must be addressed. Rural, urban, and other frequently underserved schools often do not have access to the same resources as other schools in the state, especially when it comes to opportunities for students to meet the Transition Readiness requirements. Additionally, we know that, historically, unintended consequences and inequities have been associated with student tracking, as different groups are disproportionately filtered to different tracks. Any new system must have specific plans to prevent demographics and geography from determining a student's future.
- The depth and breadth of standards addressed through courses requires more detail. All content standards must be addressed regardless of the student's pathway. Additionally, more definition, explanation, and parameters of the Personalized Coursework are needed including issues of course types that qualify and the certifications needed to teach such courses.
- A senior year math course must be required as recommended by the National Council of Teachers of Mathematics, Southern Regional Education Board, and other organizations, because research shows better outcomes for students with a fourth year of math. Discussion of the nature of this course included that is should be at least algebraically and/or statistically based to ready students for transition.
- Statistical Literacy must be integrated into all students' graduation requirements. Statistics standards are highlighted as important life skills by multiple sources, including the National Council of Teachers of Mathematics, the College Board, Guidelines for Assessment and Instruction in Statistics project (2016) and the American Diploma Project.
- Language permitting an integrated approach must be considered as in the current graduation requirements that allow districts this flexibility and is an effective and evidence-based approach to learning mathematics.
- The timing of the 10th grade exam must be reconsidered because it may result in the unintended consequences of: a) incentivizing school to push exam content into earlier grades, resulting in students' exposure to content before they are developmentally ready; b) discouraging schools from having the flexibility to offer developmental courses to incoming 9th graders who need additional support, and instead requiring they enter directly into Algebra 1; and/or c) penalizing students who accelerate in their coursework by requiring them to test over earlier content.
- The proposed system potentially incentivizes a skills-only and assessment driven approach to instruction. Appropriate changes or a plan should be developed to discourage this, and instead encourage conceptual, problem-solving and mathematical modeling experiences for students.

- The definition of Quantitative Literacy is found in the regulations for Accountability, but it is uncertain if this definition is also appropriate for graduation requirements. It appears the requirement could be met without mathematics work and, as such, needs more clarity.

Follow-up Required: Ellis will send the SREB Profile of a Kentucky Graduate to Hill who will send to committee members in the next committee email. Davis will send the motion with recommendations for modifying the proposed regulation to Schack, Taylor and Hodgson for content and Hill for grammar and clarity based on notes only. Then Davis will submit to full committee before sending it to Lewis and Ellis.

Agenda Item #3: Review and Dissemination Plan for Effective Intervention Definition
Presenter: Ryan Davis and Scotty Bratcher

Summary of Discussion: Bratcher and Davis discussed the progress and status of this definition This definition is still going through an extensive review process and should be available at the next meeting for discussion of a dissemination plan.

Action Taken: No action taken.

Follow-up Required: Place on November agenda

Agenda Item #4: NCTM's Catalyzing Change in High School Mathematics (CCiHSM) Recommendations

Presenter: Ryan Davis

Summary of Discussion: Davis reference information in meeting materials: CCiHSM's executive summary and essential concepts. He linked this to the work of the subgroups.

Action Taken: Each subgroup was assigned a key recommendation from CCiHSM to consider as follows:

Subgroup 1: Assessment for Mathematical Achievement, recommendation #4: High schools should offer continuous, four years of mathematics instruction with all students studying mathematics each year to ensure the highest-quality mathematics education for all students.

Subgroup 2: Effective Mathematics Instruction, recommendation #2: High school mathematics programs should discontinue the practice of tracking students and teachers.

Subgroup 3: An Expanded System of Mathematics Intervention: recommendation #3: Classroom instruction should be consistent with research-informed and equitable teaching practices for each student.

Subgroup 4: Communication and Collaboration, recommendation #1: Each and every student should learn the Essential Concepts (as defined in CCiHSM) in order to expand professional opportunities, understand and critique the world and experience the joy, wonder and beauty of mathematics.

Members chose a subgroup with which to work. Davis stated that he would float from group to group to hear the discussion. Subgroup discussions were held following the next agenda item.

Agenda Item #5: Mathematics Achievement Fund (MAF)

Presenter: Erin Chavez

Summary of Discussion: Chavez shared the MAF critical fact sheet as well as information shared during the MAF webinar. Using the critical fact sheet, she highlighted expectations and changes to the program for mathematics intervention teachers, +2 teachers and principals.

MAF Grant Highlights:

- The MAF grant provides schools with funds for teaching and training and implementation of intervention services that address the needs of students who are struggling to meet grade level or benchmark expectations.
- The intervention services should promote evidence-based practices in mathematics.
- Selected mathematics intervention services should be based on data specific to the needs of the identified students.

Mathematics Intervention Teacher (MIT) Expectations:

- Identify student intervention plans in Infinite Campus using the intervention tab only reporting the following:
  - type of intervention (MAF),
  - intervention content area (Math),
  - start date and end date,
  - materials code 1 (Assessing Math Concepts, Do the Math, AVMR, or Math Recovery),
  - tier of instruction,
  - duration of intervention (minutes of intervention) and
  - frequency of intervention (how many times per week).
- Complete teacher assessments/surveys as directed by KDE/Kentucky Center for Mathematics (KCM).
- Attend and fully participate in all required MIT trainings/meetings/visits as specified by KDE/KCM.
- Collaborate with District Assessment Coordinator 3 times a year to upload student's progress monitoring scores from Easy CBM.
- Collaborate with regular classroom teachers weekly to improve the mathematics instruction in primary grade classrooms.
- Attend approved statewide Mathematics Conference

+2 Teacher Expectations:

- Identify student intervention plans in Infinite Campus (IC) using the intervention tab only reporting the following: type of intervention (MAF), intervention content area (Math), and tier of instruction.
- Complete teacher assessments/surveys as directed by KDE/KCM.
- Upload Student Work Analysis Chart from step four of student work protocol three times a year.
- Attend and fully participate in all required trainings/meetings/visits as specified by KDE/KCM.
- Collaborate with MITs weekly to improve the mathematics instruction in primary grade classrooms.

Principals:

- The school principal shall actively participate in the AdMIT event held by the KDE and the KCM.
- Support MAF team in successful implementation of grant expectations.

Chavez shared important links with the CMA.

MAF KDE webpage

MAF KCM webpage
Google classroom invites will be sent out to MITs and +2 teachers
Principals AdMIT registration link (Warren, Franklin morning, Franklin afternoon, Rowan)

McGee on behalf of himself and the KCM expressed publicly appreciation for the direction and support of the MAF program.

Action Taken: No action taken.

Agenda Item #6: Catalyzing Change in High School Mathematics - Subgroup Work

Summary of Discussion: Each subgroup was asked to consider the assigned key recommendation and possible actions for the CMA.

Subgroup 1: Bobby Bennett, Jason Detre, Jason Taylor, Robin Hill (KDE in place of Amanda Ellis and facilitator for this discussion) and Dee Crescitelli (guest).

Since this key recommendation mirrored some of the discussion on the proposed graduation requirements and provides additional support for the recommendation of mathematics each year of high school, this subgroup felt that the CMA should fully support this recommendation. This should be taken to the full membership at the November meeting.

Subgroup 2: Dawn Offutt, Margaret Yoder, Theresa Williams, Nick Chaykowsky, Jenny Bay-Williams, Molly Williams, David Royster.

Discussion notes not submitted yet.

Subgroup 3: Scotty Bratcher, Suzanne Gibbs, Edna Schack

Discussion notes not submitted yet.

Subgroup 4: Dan McGee, Pam Callahan, Ted Hodgson, Donnie Osborn

Discussion notes not submitted yet.

Members not attached to a subgroup during this meeting: Karen Heavin, Andy Hightower

Action Taken: No action taken.

Adjournment: 3:30p.m.

The staff person assigned to this advisory group is responsible for the summary notes, which should be checked for accuracy and accessibility, then emailed as one Word document to KDE Communications within five business days of the meeting. Thank you!